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③

D119-796-241TRN
Job Sheet 198194



S 204773

Part No: D119-796-241TRN

Job Qty: 1 pcs

Part Name: Crosstube Turning Detail



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 7/23/19

Job Tracking No:

Created By: Marie Lajeunesse

Due Date: 9/2/19

Description:

Note: DWG RD119-796 REV.K IPP REV A RQ 14/05/27 VERIFIED BY DD IPP REV:B 16.05.04 AS PER DWG REV.I DD VERF:JLM

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Lead Time	Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier			
100	Mori Seiki TL-40 - 1	1 pcs		9/2/19	1.00	1.72	Mori Seiki TL-40 - 1			DAS 662019-08-12 9-89
110	QC 2	1 pcs		9/2/19	0.00	0.00	QC 2 - 1			
							QC 2 - 12			
							QC 2 - 14			
							QC 2 - 17			
							QC 2 - 19			
							QC 2 - 2			
							QC 2 - 20			
							QC 2 - 22			
							QC 2 - 23			
							QC 2 - 25			
							QC 2 - 32			
							QC 2 - 33			
							QC 2 - 35			
							QC 2 - 39			
							QC 2 - 4			
							QC 2 - 40			
							QC 2 - 44			
							QC 2 - 45			
							QC 2 - 48			
							QC 2 - 49			
							QC 2 - 50			
							QC 2 - 51			
							QC 2 - 52			
							QC 2 - 57			
							QC 2 - 62			
							QC 2 - 63			
							QC 2 - 8			
							QC 2 - 66			DAS 662019-08-12 9-89
							QC 2 - 64			

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P.T.O.

SCRAP

					QC 2 - 65	
					QC 2 - 5	
					QC 2 - 71	
					QC 2 - 73	
					QC 2 - 69	
120	Mori Seiki TL-40 - 1 - B4B	1 pcs	9/2/19	1.00 1.72	Mori Seiki TL-40 - 1 - B4B	
130	QC 2	1 pcs	9/2/19	0.00 0.00	QC 2 - 1	
					QC 2 - 12	
					QC 2 - 14	
					QC 2 - 17	
					QC 2 - 19	
					QC 2 - 2	
					QC 2 - 20	
					QC 2 - 22	
					QC 2 - 23	
					QC 2 - 25	
					QC 2 - 32	
					QC 2 - 33	
					QC 2 - 35	
					QC 2 - 39	
					QC 2 - 4	
					QC 2 - 40	
					QC 2 - 44	
					QC 2 - 45	
					QC 2 - 48	
					QC 2 - 49	
					QC 2 - 50	
					QC 2 - 51	
					QC 2 - 52	
					QC 2 - 57	
					QC 2 - 62	
					QC 2 - 63	
					QC 2 - 8	
					QC 2 - 66	
					QC 2 - 64	
					QC 2 - 65	
					QC 2 - 5	
					QC 2 - 71	
					QC 2 - 73	
					QC 2 - 69	
140	QC 8	1 pcs	9/2/19	0.00 0.00	QC 8 - 12	
					QC 8 - 14	
					QC 8 - 17	
					QC 8 - 20	
					QC 8 - 25	
					QC 8 - 3	
					QC 8 - 32	
					QC 8 - 33	
					QC 8 - 35	
					QC 8 - 39	
					QC 8 - 4	
					QC 8 - 44	
					QC 8 - 45	
					QC 8 - 49	
					QC 8 - 58	
					QC 8 - 8	
					QC 8 - 9	
					QC 8 - 68	

					QC 8 - 67	
					QC 8 - 1 (A)	
					QC 8 - 47	
					QC 8 - 40	
					QC 8 - 52	
					QC 8 - 23	
					QC 8 - 57	
145 Crosstubes - 2 - B4B	1 pcs	9/2/19	0.00	0.45	Crosstubes - 1 - B4B	
					Crosstubes - 2 - B4B	
					Crosstubes - 3 - B4B	
					Crosstubes - 4 - B4B	
150 Handfinish - 1-1 Chemical-B4B	1 pcs	9/2/19	0.00	0.40	Handfinish - 1 - 1 - B4B	
					Handfinish - 1 - 2 - B4B	
					Handfinish - 1 - 3 - B4B	
					Handfinish - 1 - 4 - B4B	
					Handfinish - 1 - 5 - B4B	
					Handfinish - 1 - 6 - B4B	
					Handfinish - 1 - 7 - B4B	
					Handfinish - 1 - 8 - B4B	
					Handfinish - 1 - 9 - B4B	
					Handfinish - 1 - 10 - B4B	
					Handfinish - 1 - 11 - B4B	
					Handfinish - 1 - 12 - B4B	
					Handfinish - 1 - 13 - B4B	
					Handfinish - 1 - 14 - B4B	
					Handfinish - 1 - 15 - B4B	
					Handfinish - 1 - 16 - B4B	
					Handfinish - 1 - 17 - B4B	
					Handfinish - 1 - 18 - B4B	
					Handfinish - 1 - 19 - B4B	
					Handfinish - 1 - 20 - B4B	
					Handfinish - 1 - 21 - B4B	
					Handfinish - 1 - 22 - B4B	
160 QC 7	1 pcs	9/2/19	0.00	0.00	QC 7 - 10	
					QC 7 - 13	
					QC 7 - 14	
					QC 7 - 15	
					QC 7 - 17	
					QC 7 - 18	
					QC 7 - 19	
					QC 7 - 2	
					QC 7 - 28	
					QC 7 - 3	
					QC 7 - 30	
					QC 7 - 34	
					QC 7 - 36	
					QC 7 - 37	
					QC 7 - 41	
					QC 7 - 47	
					QC 7 - 48	
					QC 7 - 51	
					QC 7 - 58	
					QC 7 - 59	
					QC 7 - 60	
					QC 7 - 9	
					QC 7 - 68	
					QC 7 - 50	
					QC 7 - 67	
					QC 7 - 40	

170 Packaging 3-1 - Stock - B4B	1 pcs	9/2/19	0.00 0.00	QC 7 - 24	
				QC 7 - 43	
				QC 7 - 61	
				QC 7 - 81	
				Packaging 3 - 1 - B4B	
				Packaging 3 - 2 - B4B	
				Packaging 3 - 3 - B4B	
				Packaging 3 - 4 - B4B	
				Packaging 3 - 5 - B4B	
				Packaging 3 - 6 - B4B	
				Packaging 3 - 7 - B4B	
				Packaging 3 - 8 - B4B	
				Packaging 3 - 9 - B4B	
				Packaging 3 - 10 - B4B	
				Packaging 3 - 11 - B4B	
				Packaging 3 - 12 - B4B	
				Packaging 3 - 13 - B4B	
				Packaging 3 - 14 - B4B	
				Packaging 3 - 15 - B4B	
				Packaging 3 - 16 - B4B	
				Packaging 3 - 17 - B4B	
				Packaging 3 - 18 - B4B	
				Packaging 3 - 19 - B4B	
				Packaging 3 - 20 - B4B	
				Packaging 3 - 21 - B4B	
				Packaging 3 - 22 - B4B	
				Packaging 3 - 23 - B4B	
				Packaging 3 - 24 - B4B	
				Packaging 3 - 25 - B4B	
				Packaging 3 - 26 - B4B	
				Packaging 3 - 27 - B4B	
				Packaging 3 - 28 - B4B	
				Packaging 3 - 29 - B4B	
				Packaging 3 - 30 - B4B	
				Packaging 3 - 31 - B4B	
				Packaging 3 - 32 - B4B	
				Packaging 3 - 33 - B4B	
				Packaging 3 - 34 - B4B	
				Packaging 3 - 35 - B4B	
				Packaging 3 - 36 - B4B	
180 QC 21 - FG	1 pcs	9/2/19	0.00 0.00	QC 21 - FG - 21	
				QC 21 - FG - 70	
				QC 21 - FG - 53	

Part Op 100 - 1-Fill tube with sand & install plugs on both ends as per Folio FB298 2-Turn first side as per Folio FB298
 Descriptions: 110 - (QC2- Inspect parts off machine FAI/FAIB)
 120 - 1-Turn second side as per Folio FB298
 130 - (QC2- Inspect parts off machine FAI/FAIB)
 140 - (QC8- Inspect parts - second check)
 145 - GRIND ONLY TRANSITION LINES SMOOTH LONGITUDE WAY.
 150 - 1- Handfinish X-TUBE INSIDE AND OUT. ALODINE AND ACID ETCH X-TUBE AS PER DWG . USE RED SCOTCH BRITE PAD.
 160 - (QC7-Inspect Chemical Conversion Coat)
 170 - (Identify as per dwg & Stock Location: _____) LOCATION : LG014
 180 - (QC21- Final Inspection - Work Order Release)

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D6023-106	Crosstube Material	1 pcs (1 ea)	100-Mori Seiki TL-40 - 1	S013837

Job Allocations				
Operation	Component Part	Required	Inventory	Allocated
100-Mori Seiki TL-40 - 1	D6023-106	1	14	0
Part Specifications				
Specifications could not be found.				



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CANADA
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Container No: S204773



Part: D119-796-241TRN

Job No: 198194

Serial No/Batch: S204773

Revision: K

Inspector:

Exp Date:

Instructions:

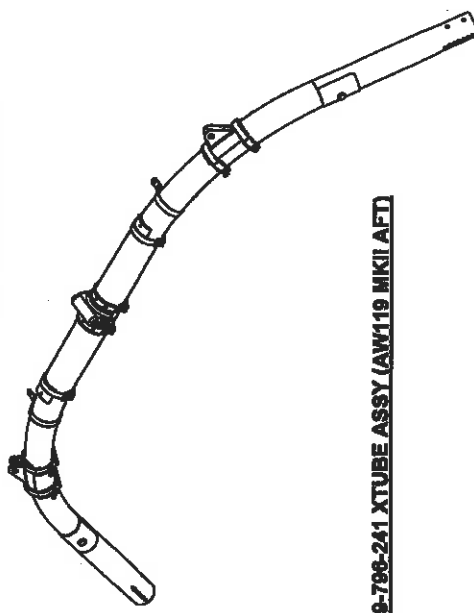
Date: 08/12/19

3

DART AEROSPACE LTD		Work Order: 198199
Description: Crosstube Assembly (AW119 MKII Aft)		Part Number: D119-796-241TRN
Inspection Dwg: D119-796-241 Rev: ^{DAS} 35 ₉₋₈₉		Page 1 of 2

FIRST ARTICLE INSPECTION CHECKLIST

Inspection Sheet Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
SIDE A	5.88	+/-0.030				
	2.516	+0.005/-0.000				
	2.626	+0.005/-0.000				
	2.627	+0.005/-0.000				
	2.798	+0.005/-0.000				
	2.799	+0.005/-0.000	2.804 ✓			
	2.989	+0.005/-0.000	2.994 ✓			
	3.191	+0.005/-0.000	3.185 ✓	✓	CNC-05	under size "006"
	3.200	+0.005/-0.000	3.205 ✓		"	
SIDE B	5.88	+/-0.030				
	2.516	+0.005/-0.000				
	2.626	+0.005/-0.000				
	2.627	+0.005/-0.000				
	2.798	+0.005/-0.000				
	2.799	+0.005/-0.000	2.804 ✓			
	2.989	+0.005/-0.000	2.994 ✓			
	3.191	+0.005/-0.000	3.196 ✓		CNC-05	
	3.200	+0.005/-0.000	3.205 ✓		"	
	105.71	+/-0.020	105.71 ✓		Tape	



D119-788-241 XTUBE ASSY (AW119 MKII AFT)

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE

WORK ORDER
NO 198199 MS
140724

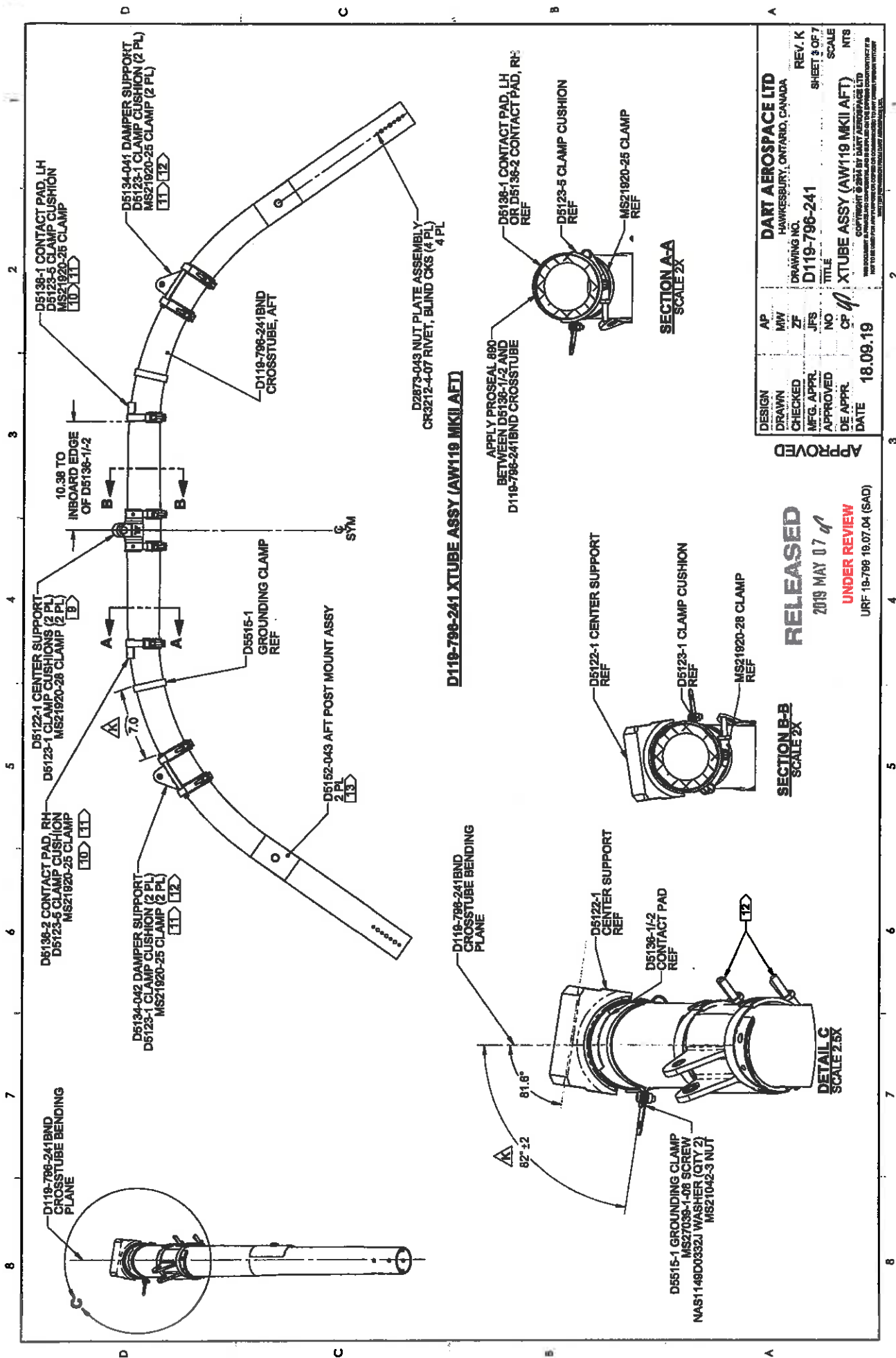
- NOTES:
- 1) MATERIAL: N/A
 - 2) FINISH: MASK D5134-041/042 DAMPER SUPPORT ASSEMBLIES, CUFFS, D5136-1/2 CONTACT PADS, THE COMPLETE CIRCUMFERENCE OF THE TUBE UNDER THE D5122-1 CENTER SUPPORT AND THE TAB ON THE D5515-1 GROUNDING CLAMP PRIOR TO APPLICATION OF CLEAR COAT/PAINT
 - 3) IF NECESSARY TOUCH UP PRIMER ON OUTSIDE OF CROSSTUBE PER DART QSI 005 4.2
 - 4) APPLY WHITE CLEAR COAT TO THE UNDERSIDE OF CROSSTUBE AS SHOWN (B4-2, HATCHED AREA)
 - 5) MASK THE UNDERSIDE OF CROSSTUBE AS SHOWN (B4-2, HATCHED AREA)
 - 6) PAINT OUTSIDE PER DART QSI 006 4.2
 - 7) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 8) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 9) BREAK SHARP EDGES: N/A
 - 10) IDENTIFICATION: IDENTIFY USING PART NUMBER "D119-788-241" AND BATCH NUMBER ON INSIDE OF CUFF PER QSI 044 6.4
 - 11) WEIGHT: 28.28 lbs
 - 12) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM DEFECTS SUCH AS SCRATCHES, NICKS OR DENTS. DEFECTS UP TO 0.005 MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
 - 13) INSTALL D5122-1 CENTER SUPPORT HAND TIGHT ONLY. DO NOT TORQUE. INSTALL RED TAG TO INDICATE "D5122-1 CENTER SUPPORT MUST BE BONDED PER IN-D119-788 PRIOR TO FLIGHT".
 - 14) PRIOR TO FINISHING, ABRASIVE MATING SURFACES OF D5136-1/2 AND SURFACE OF CROSSTUBE WITH SCOTCH BRITE 7447 RED AND REMOVE RESIDUE WITH DUPONT 4105S WASH 'N' WIPE DEGREASER. APPLY A 0.100" MIN THK LAYER OF PROSEAL 880 ON THE INSIDE CONCAVE SURFACE OF THE D5136-1/2 CONTACT PADS AND INSTALL AT AN 8.4" OFFSET FROM THE CROSSTUBE BENDING PLANE. INSTALL MS21920-26 CLAMPS AND D5173-5 CLAMP CUSHIONS WHILE WET. PRIOR TO PACKAGING, RE-CHECK TORQUE ON CLAMPS AFTER PROSEAL 880 SEALANT HAS CURED FOR 72 HOURS.
 - 15) TORQUE MS21920 CLAMPS 80 - 100 IN-LB. ENSURE AT LEAST 15 THREADS SHOWING IN SAFETY. THE NUT HAS NOT BOTTOMED-OUT AFTER TORQUING AND THE NUT IS FACING AFT.
 - 16) PRIOR TO FINISHING, POSITION AND INSTALL D5134-041/042 DAMPER SUPPORTS AND CROSSTUBE WITH ABRASIVE MATING SURFACES OF THE D5134-041/042 DAMPER SUPPORTS AND CROSSTUBE WITH SCOTCH BRITE 7447 RED AND REMOVE RESIDUE WITH DUPONT 4105S WASH 'N' WIPE DEGREASER. APPLY A 0.100" MIN THK LAYER OF PROSEAL 880 ON THE INSIDE CONCAVE SURFACE OF THE D5134-041/042. INSTALL MS21920-26 CLAMPS AND D5123-1 CLAMP CUSHIONS WHILE WET. PRIOR TO PACKAGING, RE-CHECK TORQUE ON CLAMPS AFTER PROSEAL 880 SEALANT HAS CURED FOR 72 HOURS. ENSURE THAT THE MS21920 CLAMPS ARE POSITIONED AS SHOWN IN DETAIL C.
 - 17) PRIOR TO FINISHING, ABRASIVE MATING SURFACES OF CROSSTUBE AND D5162-043 WITH SCOTCH BRITE 7447 RED AND REMOVE RESIDUE WITH DUPONT 4105S WASH 'N' WIPE DEGREASER. INSTALL D5162-043 WITH LAYER OF PROSEAL 880 ON INSIDE CONCAVE SURFACE, 0.100" MIN THK LOCATE D5162-043 USING TOOL DT10112.
 - 18) INSTALL THE D5616-1 GROUNDING CLAMP AND ASSOCIATED HARDWARE PER DETAIL "C" PRIOR TO FINISHING. TORQUE THE MS21042-3 NUT 12-15 IN-LB. COMPLETELY SEAL THE EDGES OF THE CLAMP USING PROSEAL 880.
 - 19) CARRY OUT A RESISTANCE CHECK BETWEEN THE D5515-1 GROUNDING CLAMP AND ANY UNPAINTED SECTION OF THE CROSSTUBE IN ACCORDANCE WITH AC43-13-B CHAPTER 11. MAXIMUM RESISTANCE IS 3 MILLIOHMS.

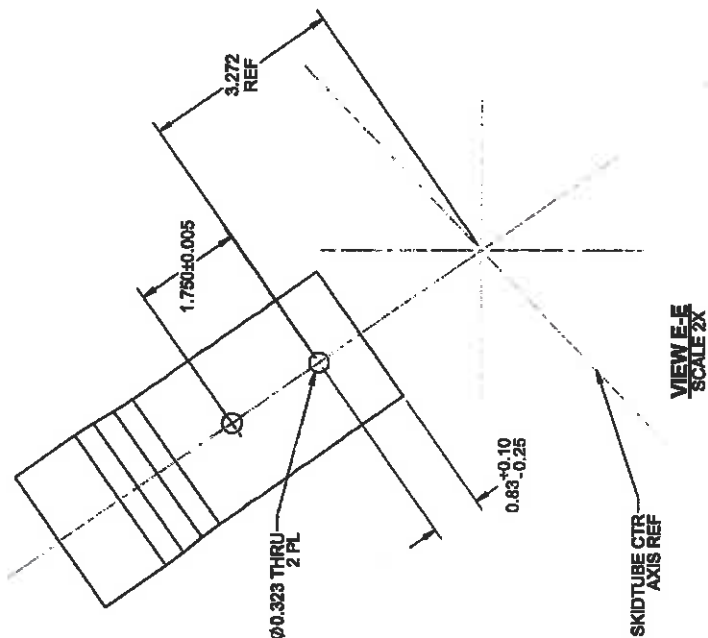
UNDER REVIEW
URF 18-788 18.07.04 (SAD)

RELEASED
2018 MAY 07
EON M-755

REV.	DESIGN	AP	DESCRIPTION	BY	DATE
1	DRAWN	MM			
2	CHECKED	ZF			
3	MFG APPR	JFS			
4	APPROVED	NO			
5	DE APPR	CP			
6	DATE	18.09.19			
NEW ISSUE					
DESCRIPTION					
DART AEROSPACE LTD					
HAWKESBURY, ONTARIO, CANADA					
DRAWING NO. D119-788-241					
REV. K					
SHEET 1 OF 7					
TITLE					
XTUBE ASSY (AW119 MKII AFT)					
SCALE					
NTS					
DART AEROSPACE LTD					
HAWKESBURY, ONTARIO, CANADA					
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APPROVED





RELEASED

2019 MAY 07 W

DESIGN	AP	DART AEROSPACE LTD	REV. K
DRAWN	MW	HAWKESBURY, ONTARIO, CANADA	SHEET 6 OF 7
CHECKED	ZF	DRAWING NO.	SCALE
MFG. APPR.	JTS	D118-798-241	NTS
APPROVED	CP	TITLE	DATE
DE APPR.		X-TUBE ASSY (AW1118 MKII AFT)	18.09.19
DATE		CONTRACT NO. 84-1 BY DART AEROSPACE LTD THIS DRAWING IS THE PROPERTY OF DART AEROSPACE LTD IT IS TO BE USED FOR THE PURPOSES SPECIFIED ONLY IT IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT THE WRITTEN PERMISSION OF DART AEROSPACE LTD	

APPROVED

WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No.

Route update only



Job: 198194		DISPOSITION		DEPARTMENT/PROCESS			
Part No. 0119-796-241 TRN		Rework ☐ Scrap ☒ Use-as-is ☐		Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date:		Sequence #:		QTY Affected:			
Description Work Order Deviation		Disposition					
3.185 groove machined at 46.500"		SCRAP. Highest stress area of tube. 4/19/26 #639					
Completed By		Lead hand / Supervisor				QC / QA Coordinator	
MD 2019/09/26		JTW 17-09-26				DAS 68 9-89 SEP 26 2019	
MRB (QS1042)		a90926					
Root Cause		FAULT CATEGORY					
Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread ☐					
Other/Details:							